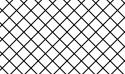


TAPER, BUFFER ZONE & SIGN SPACING CHART

ROAD TYPE	POSTED SPEED MPH (S)	MINIMUM TAPER LENGTH(L)	LENGTH OF BUFFER(BZ)	MINIMUM SIGN SPACING (SS)				ONE LANE TWO-WAY FLAGGING
		12' LANE CLOSURE	DESIRABLE	A	B	C	D	TAPER LENGTH
		feet	feet	feet	feet	feet	feet	feet
CONVENTIONAL	30 AND LOWER	180	200	100	100	100	100	50
	35	245	250	350	350	350	175	
	40	320	305					
	45	540	360	500	500	500	250	100
	50	600	425					
	55	660	495					
	60	720	570					
	65	780	645					
FREEWAY/ EXPRESSWAY	65	780	645	1000	1640	2640	500	
	70	840	730					
	75	900	820					

1- TAPER LENGTH FORMULAS

SPEED	FORMULA
FOR SPEEDS OF 40 MPH AND LESS	$L = \frac{WS^2}{60}$
FOR SPEEDS OF 45 MPH AND GREATER	$L = WS$

WHERE:

L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = SPEED IN MPH

1/3 L = FOR SHOULDER TAPER
1/2 L = FOR SHIFTING TAPER

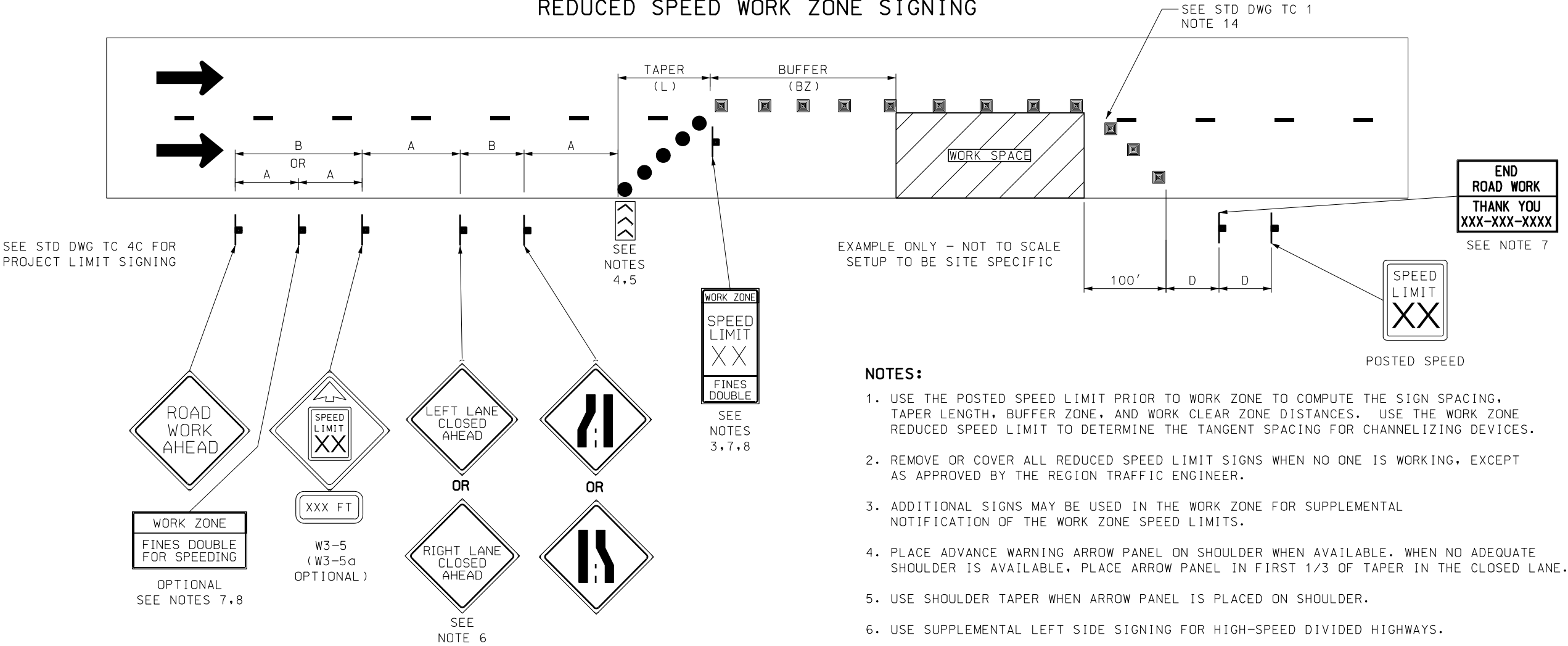
2- CHANNELIZING DEVICES

- A) MERGING AND SHIFTING TAPERS: USE A MINIMUM OF 1 DEVICE PER FOOT OF LANE CLOSURE, PLUS 1 ADDITIONAL DEVICE TO START.
- B) SHOULDER, ONE-LANE TWO-WAY, AND DOWNSTREAM TAPERS: USE A MINIMUM OF 1 DEVICE PER 3 FEET OF WIDTH (OR PORTION THEREOF), PLUS 1 ADDITIONAL DEVICE TO START.
- C) ON TANGENT: $S \times 2 =$ SPACING UP TO 120 FEET MAXIMUM.
- D) LENGTH OF BUFFER ZONE (BZ) IS THE DISTANCE FROM END OF LANE CLOSURE TAPER TO WORK SPACE, OR ANY OBSTRUCTION PRIOR TO WORK SPACE.

TRAFFIC CONTROL DEVICE LEGEND

- SIGN (FIXED OR PORTABLE)
- CHANNELIZING DEVICE (SEE STD DWG TC 1A)
- PLASTIC DRUMS/DIRECTIONAL INDICATOR BARRICADE
- FLAGGING STATION
- ADVANCE WARNING ARROW PANEL
- BARRIER
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- DIRECTION OF WORK VEHICLE

REDUCED SPEED WORK ZONE SIGNING



NOTES:

- USE THE POSTED SPEED LIMIT PRIOR TO WORK ZONE TO COMPUTE THE SIGN SPACING, TAPER LENGTH, BUFFER ZONE, AND WORK CLEAR ZONE DISTANCES. USE THE WORK ZONE REDUCED SPEED LIMIT TO DETERMINE THE TANGENT SPACING FOR CHANNELIZING DEVICES.
- REMOVE OR COVER ALL REDUCED SPEED LIMIT SIGNS WHEN NO ONE IS WORKING, EXCEPT AS APPROVED BY THE REGION TRAFFIC ENGINEER.
- ADDITIONAL SIGNS MAY BE USED IN THE WORK ZONE FOR SUPPLEMENTAL NOTIFICATION OF THE WORK ZONE SPEED LIMITS.
- PLACE ADVANCE WARNING ARROW PANEL ON SHOULDER WHEN AVAILABLE. WHEN NO ADEQUATE SHOULDER IS AVAILABLE, PLACE ARROW PANEL IN FIRST 1/3 OF TAPER IN THE CLOSED LANE.
- USE SHOULDER TAPER WHEN ARROW PANEL IS PLACED ON SHOULDER.
- USE SUPPLEMENTAL LEFT SIDE SIGNING FOR HIGH-SPEED DIVIDED HIGHWAYS.
- SEE STD DWG TC 4D FOR SIGN DESIGN AND LAYOUT.
- USE "FINES DOUBLE" SIGNING AND SPEED LIMIT SIGNING AT ALL MAJOR INTERSECTIONS/INTERCHANGES WITHIN THE PROJECT WHEN REDUCED SPEEDS AND/OR "FINES DOUBLE" OPTION IS USED.

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION

RECOMMENDED FOR APPROVAL
CHAIRMAN STANDARDS COMMITTEE
APPROVED
DEPUTY DIRECTOR

JAN 01 2008
DATE

JAN 01 2008
DATE

REDUCED SPEED WORK
ZONE SIGNING
GENERAL

STD DWG
TC 4B